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| Notice of Allowability | Application No. | Applicant(s) | |
| | 10/765,406 | RINERSON ET AL. | |
| | Examiner | Art Unit | |
| | Tu-Tu Ho | 2818 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.


1. ☒ This communication is responsive to Amendment filed 11/23/2005.
2. ☒ The allowed claim(s) is/are 1, 2 and 4-48.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |


Tu-Tu Ho Dec. 01, 2005

DETAILED ACTION

1. Applicant's Amendment filed 11/23/2005 has been reviewed and placed of record in the file.
2. The request to change the Attorney Docket No. has been forwarded to the appropriate PTO supporting staff.
3. The 112-second-paragraph rejection has been withdrawn in view of Applicant's clarification. One of the reasons the examiner raised the issue of "stable", "unstable", "high temperature", and "first temperature" in the Office Action mailed 08/23/2005 and not in the Office Actions mailed 06/09/2005 and 12/16/2004 is that pertinent technologies appear to have changed since 08/02/2002 and since 12/16/2004, and so have the skill of one of ordinary skill in the art and the claims – not said limitations per se but said limitations in the context of other (amended) limitations in the claims; and Applicant's clarification clearly helps with clear understanding of the claims by one of ordinary skill in the art at the time the invention was made and at the time of this Office Action.

Allowable Subject Matter

4. Claims 1-2, 4-24, 45-48, and 25-44 (to be renumbered 1-47) are allowable over the prior art of record.

The following is an examiner's statement of reasons for allowance: The prior art of record fails to teach or render obvious a re-writable cross-point memory and a method of manufacturing thereof with all exclusive limitations as recited in claims 1, 25, 33, and 44, comprising a substrate including active circuitry having multiple layers of conductive paths; a two-terminal cross-point memory array positioned over the active circuitry and including a plurality of lower conductive lines and a plurality of upper conductive lines sandwiching a plurality of two-terminal memory cells; the active circuitry, the multiple layers of conductive paths, and the plurality of lower conductive lines being stable at a first temperature, a high temperature, or at a temperature of at least 450 °C; the plurality of two-terminal memory cells or at least a portion of each of the plurality of two-terminal memory cells or at least one layer of each of the plurality of two-terminal memory cells being formed at the first temperature, at the high temperature, or at said temperature of at least 450 °C; the plurality of two-terminal memory cells each including a multi-resistive state element and/or the plurality of upper conductive lines being unstable at the first temperature or at the high temperature; and wherein "stable", "unstable", and "high temperature" have been interpreted in light of the specification and the prosecution history.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu-Tu Ho whose telephone number is (571) 272-1778. The examiner can normally be reached on 6:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID NELMS can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tu-Tu Ho
December 01, 2005